



Glenn Research Center



# FCF Combustion Science Capabilities Concept

## Fluid System

- Gas Blending/Premixed
- Dynamic Blending
- Exhaust Vent
- GC

## Optics Plate (865 mm x 1245 mm)

- Fold Out for diagnostic access
- 100 Liter, 8 window Combustion Chamber
- Harnesses/Tubing between plates
- Some external tubing and harnessing

## Environmental Control

- Fans (2) & Radiator located in top of rack

## Diagnostics

- Replaceable/Interchangeable
- Expansion Volume (250 mm x 250 mm x 425 mm)

## Baseline

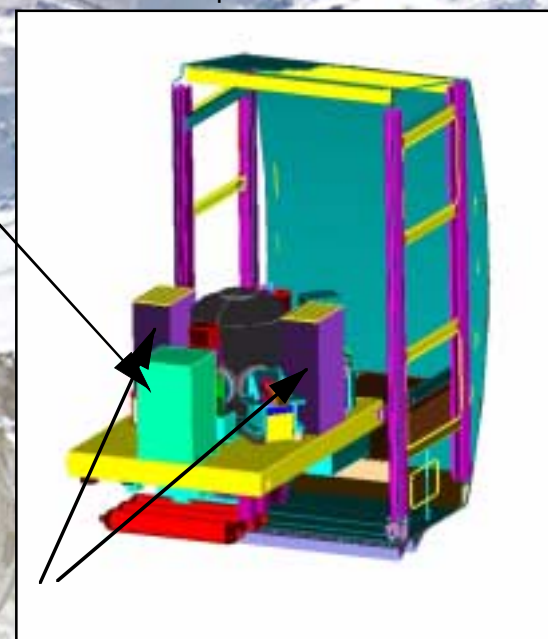
- SVF/ST
- Illumination
- HFR with APT
- Low Light Level UV (2)
- Mid IR

## Rack

- Baselined - 4 ISPR
- Optics plate moved down 2 PU

## Power and Data System

- 28 Volt Conversion
- 16 bit Data Acquisition



## Imaging Processing Packages (2)

- (250 mm x 210 mm x 500 mm)

## Diagnostic Changeout Orientation



## Door

- Provides Structural Augmentation
- Provides Thermal Containment
- Provides for Fire Detection

## Operational Orientation